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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,000	02/01/2006	Kwang-jin Lee	NEK-0012	9626

23413 7590 11/10/2009
CANTOR COLBURN, LLP
20 Church Street
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Hartford, CT 06103

EXAMINER

LENIHAN, JEFFREY S

ART UNIT	PAPER NUMBER
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1796

NOTIFICATION DATE	DELIVERY MODE
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11/10/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

Office Action Summary	Application No. 10/567,000	Applicant(s) LEE ET AL.	
	Examiner Jeffrey Lenihan	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,7,9-15 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7,9-15 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/27/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the amendment filed on 08/27/2009.
2. The objections and rejections not addressed below are deemed withdrawn.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

Continued Examination Under 37 CFR 1.114

4. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/27/2009 has been entered.

Claim Rejections - 35 USC § 112

5. Claims 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

6. Claims 1, 3, 4, 7, 9-15, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahn et al, WO 2004/058839, in view of Miyatake et al, US5804655.

The rejection stands as per the reasons outlined in the previous Office Action, incorporated herein by reference.

Response to Arguments

7. Applicant's arguments, see pages 11-13, filed 08/27/2009, with respect to the rejection of claims over Fuji et al, US5298559, in combination with additional references have been fully considered and are persuasive. The rejection of the claims over Fuji has been withdrawn.

8. Applicant's arguments filed 08/27/2009 with respect to Ahn in view of Miyatake have been fully considered but they are not persuasive.

9. Regarding the presence of additional, unclaimed elements/monomers in the rubber compositions rendered obvious by the prior art: The examiner notes that independent claim 1 recites that both the acrylic rubber core and the silicon rubber core consist essentially of their respective recited components. It has been held that "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s) of the claimed invention;" see *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976). Furthermore, absent a clear indication in the specification or claims of the basic

Art Unit: 1796

and novel characteristics of the invention actually are, the phrase “consisting essentially of” will be construed as equivalent to “comprising” for the purposes of searching for prior art under 35 U.S.C. 102 and 103; see *PPG*, 156 F.3d at 1355, 48 USPQ2d at 1355 (MPEP § 2111.03). Applicant has not provided evidence in either the specification or the submitted arguments that the presence of the additional components recited in the prior art would materially affect the basic and novel characteristics of the claimed invention; the examiner therefore takes the position that the presence of said additional components is not sufficient to distinguish the claimed invention from the prior art.

10. Furthermore, the examiner disagrees with applicant’s statement that Miyatake requires an acrylic rubber precursor component (C). The examiner notes that Miyatake discloses a hybrid rubber (D1) prepared by grafting a silicon rubber (B) onto an acrylic rubber (A) (Column 3, lines 25-49) that may be prepared by a process that does not recite the use of said acrylic rubber precursor (C) (Column 4, line 65 to Column 5, line 33). It has been held that “a reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art, including non-preferred embodiments,” *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.). The fact that Miyatake discloses that rubber compositions (D1) may be prepared using an acrylic rubber precursor (C) does not constitute a teaching away from its disclosure of that rubber compositions (D1) may be made by a process that does not use said acrylic rubber precursor (C).

11. Regarding the structure of the hybrid rubber core; the examiner first notes that independent claim 1 only recites that the hybrid rubber core comprises an acrylic rubber

Art Unit: 1796

and a silicon rubber; the independent claim does not require the presence of a discrete silicon rubber phase dispersed locally onto the inner part and surface of a continuous acrylic rubber core. Arguments regarding this morphology are therefore not germane to the patentability of the independent claim. Dependent claim 13 is the only claim to require the morphology described by applicant on page 10 of the remarks filed on 08/27/2009. With regards to this claim, Miyatake teaches that silicone rubber is dispersed in the acrylic rubber (Column 11, lines 65-68), corresponding to the required limitation that the silicon rubber is dispersed locally onto the inner part of the acrylic rubber. Regarding the dispersion on the surface of the acrylic rubber, the silicon rubber of Miyatake is grafted to the acrylic rubber through the reaction with the functional group of monomer A-3, which is one of the monomers copolymerized to form the acrylic rubber. Furthermore, grafting the silicon rubber to the acrylic rubber through reaction with this functional group will inherently result in the silicon rubber being immobilized at a surface of the acrylic rubber, thereby meeting the limitations of the claim. The examiner therefore maintains the position that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the seed-core-shell impact modifying agent of Ahn by using a silicon rubber-modified acrylic rubber, taught by Miyatake, as the rubber core, for the reasons outlined in the previous Office Actions incorporated herein by reference.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Lenihan whose telephone number is (571)270-5452. The examiner can normally be reached on Monday through Thursday from 7:30-5:00 PM, and on alternate Fridays from 7:30-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeffrey Lenihan/
Examiner, Art Unit 1796

/JL/